• COLORADO RIVER •

AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Vol. VIII. FEBRUARY 25, 1941 No. 2

Man and the Machine. A photographic silhouette study made on an aqueduct distribution construction job by District Photographer Walter Winzell.

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AQUEDUCT NEWS
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
306 West Third St.
Los Angeles, California

Published monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. VIII February 25, 1941 No. 2

Wide Area Covered By Aqueduct Jobs

With eighteen contracting firms and a total of about 900 men on the job in the field, the District is pressing forward the completion of all features of the distribution system required to deliver soft and filtered water to its cities.

These construction operations are progressing at locations scattered over a wide area extending from Morris Dam on the east to Beverly Hills on the west, and from Glendale on the north to Long Beach on the south. The work is being carried forward under the supervision of Distribution Engineer R. B. Diemer.

At the Softening and Filtration Plant virtually all structural work is finished. Contractors are now engaged in completing the installation of laboratory equipment and interior fixtures. At the same time work is in progress on the landscaping of the plant grounds. It is expected that District engineers will be able to begin preliminary testing operations about April 15, with all facilities being ready to begin regular operating tests on or shortly after May 1.

Two contracting firms are pushing forward the construction of the Orange County feeder that will deliver water from the Softening Plant to the cities of Fullerton, Anaheim and Santa Ana. Work is progressing at five locations on the line.

One contract on the construction of the Glendale-Burbank delivery line has been completed. Work on the second contract on this line continues, and is scheduled to be completed on or about March 15.

Lining of the Hollywood tunnel continues, while work on the installation of the other sections of the Burbank-Santa Monica line is being carried on by two contractors at two locations.

Construction of the lateral connections that tie in with the municipal water systems of Burbank and Compton have been completed.

Benefit of Soft and Filtered Water Pointed Out by National Authority

Note: Benefits that will be enjoyed by homes and industries using the soft and filtered water to be provided by the Colorado River Aqueduct recently were pointed out by Mr. J. M. Montgomery in an address on February 3 before the Los Angeles Electric Club. Mr. Montgomery is a member of the firm of Hoover and Montgomery, nationally known authorities on water softening and filtration methods. This firm has been the District's consultant in the planning and building of the Softening and Filtration Plant now nearing completion. Excerpts from Mr. Montgomery's address are being printed by the News in two installments. The first installment follows:

Standards of water quality, like other standards, are continually being raised. Not so many years ago the only standard was based on prejudice as exemplified by Mark Twain in "Life on the Mississippi", where he describes the argument between two river men regarding the relative merits of clear Ohio River water for drinking purposes. The Ohio River enthusiast was strong for the more esthetic clear Ohio River product. The hardy soul from the great "Father of Waters" was completely sold on Mississippi mud as being both drink and food.

During the last century many cities were proud merely to have a water works system, and frequently pumped raw river water into the mains. The thought in those days centered around fire protection and the prevention of such great conflagrations as the Chicago fire. Consequently most water works were installed with the idea of furnishing fire protection only. Even though the science of bacteriology was in its infancy, many people recognized that there was some connection between the water supply and typhoid fever. For this reason most people would not drink water from the city mains and some will not to this day. Enough, however, drank from the public supply and from other polluted sources to make typhoid fever and related diseases major health problems.

The first real steps forward in the improvement of the standard of water quality came with the development of bacteriology. When people came to realize that many of the diseases from which mankind has been suffering since the beginning of time were water borne, and were preventable, steps were soon taken to make public water supplies safe. As a consequence, typhoid fever has been eliminated as a public health problem and many of the younger physicians would not recognize a case if they saw one.

Until very recently the health standard of quality has remained uppermost in the minds of most people. Water has been considered to be satisfactory if it met the following specifications:

a. It should contain no pathogenic or disease producing bacteria.

b. It should be clear.

(*Continued on Page* 8.)

– DIRECTORY –

BOARD OF DIRECTORS
W. P. Whitsett, Chairman
Franklin Thomas, Vice-Chairman
S. H. Finley, Secretary
Anaheim.....E. P. Hapgood
Beverly Hills....Arthur Taylor
Burbank....James L. Norwood
Compton....Warren W. Butler
Fullerton..Walter Humphreys
Glendale.....Herman Nelson
Long Beach....William M. Cook
Los Angeles.....Otto J. Emme
Los Angeles....Perry H. Greer
Los Angeles.....Joseph Jensen
Los Angeles.....D. W. Pontius
Los Angeles.....John R. Richards
Los Angeles.....Victor H. Rossetti
Los Angeles.....W. P. Whitsett
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Santa Monica.....Arthur P. Creel
Torrance.....Charles T. Rippy
J. M. Luney, Controller
Ira R. Pontius, Treasurer

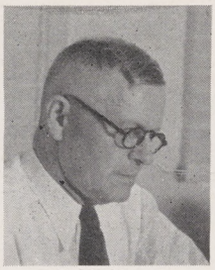
GENERAL STAFF
General Manager and Chief Engineer....F. E. Weymouth
Asst. Chief Engineer.....Julian Hinds
General Counsel .....James H. Howard
Asst. General Counsel.....Arthur A. Weber
Chief Elec. Engineer.....J. M. Gaylord
Asst. to Gen. Mgr.....Don J. Kinsey
Asst. Controller, G. D. Smith
Asst. Treasurer, C. G. Olson
Secy. to Gen. Mgr.....Elisabeth von Hagen

DIVISION ENGINEERS
Distribution.....R. B. Diemer
Transmission....Robt. N. Allen
Maintenance.....W. J. Neale
Field. Supt. Pumping.....T. T. Walsh

Aqueduct Contracts
Morris Dam Connection
C. M. Elliott and Stroud-Seabrook
M. W. Hongola, Supt.
Distribution System
Softening and Filtration Plant
Griffith Company. Weymouth Crowell Co., Project Manager. Olen Evans. Field Supt.
Waste Water Disposal Line
United Concrete Pipe Corporation
Schedule 29P
American Concrete & Steel Pipe Co.
Schedule 30SC
J. F. Shea Co., Inc.
Hollywood Tunnel
J. F. Shea Co., Inc.
Schedule 31P
United Concrete Pipe Corp.
Schedules 32CI, 33CI
Artukovich Bros.
Schedules 34P, 35P, 36P
American Concrete & Steel Pipe Co.
Schedule 37SC
Macco Construction Co.
Schedules 38SC, 39A
Werner & Webb
Schedule 40A
Warren Southwest, Inc.
Schedule 41P
American Concrete & Steel Pipe Co.
Orange County Reservoir
C. G. Willis & Sons, Inc., and Charles G. Willis.

Completing Aqueduct Distribution System. (1) Pipe line connecting Morris reservoir and aqueduct. (2) Filtration operating room, and (3) settling basins at Softening and Filtration Plant. (4) Steel pipe for Orange County feeder. (5) Welding pipe in trench. (6) Orange County feeder in Anaheim. (7) Connecting with Glendale. (8) On Sunset Blvd. bridle path in Beverly Hills. (9) Connecting with Long Beach.

B. C. Leadbetter


J. B. Bond

John Stearns

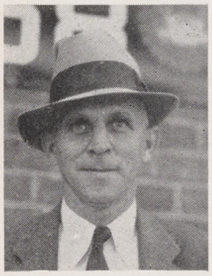
J. L. Burkholder

W. E. Whittier

Lewis H. Tuthill

C. E. Sides

W. L. Chadwick


Ben Bolton

Kenneth McIsaacs

Aqueduct Alumni

Officials and citizens of the District have good reason to be proud of the efficient and loyal services rendered by the men and women who have helped to build the aqueduct. With the completion of the main aqueduct and much of the work on the distribution system, a large proportion of the veteran aqueducters have gone into other fields of service. Today these men and women are at work on large projects in almost every quarter of the world. The District receives many inquiries as to the present activities of former employees. Here is information concerning some of these men and women. Photographs of a number of those listed are also shown.

G. E. Archibald: Was, Resident Engineer, Div. 1; Supt. of Construction, Eagle and Hayfield pumping plants. Now, Engineer with Edison Co., on Boulder Dam transmission line construction, Los Angeles.

John R. Austin: Was, Supt. of Construction, Thousand Palms and Berdoo tunnel camps; Supt. of Construction, Lawrence Adit, San Jacinto tunnel. Now, Supt., Carlton tunnel, Cripple Creek, Colo.

George E. Baker: Was, Resident Engineer, Divisions 1 and 4; Resident Engineer, Distribution Division tunnels. Now, City Engineer, Long Beach, Calif.

H. A. Beall: Was, Personnel Director. Now, Personnel Director with Adel Precision Parts Corp., North Hollywood, Calif.

J. O. Binney: Was, Communications Engineer, Electrical-Mechanical Div. Now, Engineer with Edison Co., Los Angeles.

Charles A. Bissell: Was, Office Engineer, Design Div. Now, with Bureau of Reclamation, Customhouse, Denver, Colo.

H. R. (Ben) Bolton: Was, Senior Engineer, Distribution Div. Now, Field Engineer on Army construction work for Morrison-Knudsen Co., Paso Robles, Calif.

J. B. Bond: Was, in charge of main aqueduct field surveys; Division Engineer, Divisions 5 and 6. Now, Engineer with the Venezuela Government, Caracas, Venezuela.

R. C. Booth: Was, Division Engineer, Div. 1; Supt. of Construction, Eagle Mt. pumping plant. Now, Engineer with Electric Bond & Share Co., Sao Paulo, Brazil.

R. L. Bryant: Was, Supt., Little Morongo tunnel camp, Coachella Div. Now, Engineer, Edificio Palma, Barranquilla, Colombia.

J. L. Burkholder: Was, General Supt., Coachella tunnels; Assistant General Manager. Now, Senior Engineer, American Section, International Boundary Commission, El Paso, Tex.

W. L. Chadwick: Was, Senior Engineer, Design Div. Now, Civil Engineer, Edison Co., Los Angeles.

Vern Davis: Was, General Foreman, Div. 2. Now, with Bureau of Reclamation, Parker Dam power plant.

V. T. Davis: Was, Supt., Fargo tunnel camp; General Foreman, Iron Mt. pumping plant. Now, with Warner Construction Co., Kremmling, Colo.

D. K. (Doug) Fagg: Was, Clerk Supervisor, Electrical-Mechanical Div. Now, Field Clerk for contractors on naval construction, Pearl Harbor, T. H.

G. E. Farmer: Was, Engineer, Electrical-Mechanical Div. Now, Engineer with the T.V.A., Chattanooga, Tenn.

H. G. Gregory: Was, Engineer, Design Div. Now, Engineer with the Lockheed Corp., Burbank, Calif.

M. W. Hawks: Was, Engineer, Design Div. Now, Engineer with Standard Oil Co., San Francisco,

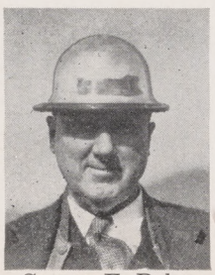
O. T. Helpling: Was, in Traffic Section, Purchasing Div. Now, Traffic Mgr. on Army construction work for L. E. Dixon Co., Paso Robles, Calif.

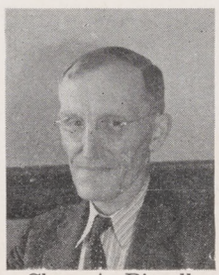
L. H. (Ike) Henderson: Was, Geologist Safety Engineer; Engineer, Div. 5. Now, Engineer, American Section, International Boundary Commission, El Paso.

M. Hjalmarson: Was, Supt. of Construction, Fan Hill siphon. Now, Supt. of Construction, Panama Canal, Ancon, Canal Zone, Panama.

Col. N. F. Jamieson: Was, Director, Labor Employment Office and Personnel Office. Now, Employment Director for contractors on naval defense construction on Pacific Ocean Islands, Douglas Bldg., Los Angeles.

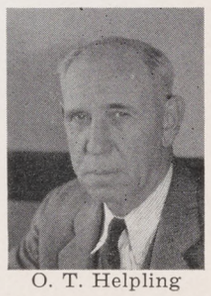
Bud Weaver

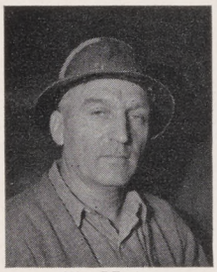

George E. Baker


Chas. A. Bissell

O. J. Schieber

C. J. Kavanagh


O. T. Helpling


Ed Noon

Jack Shrode

G. E. Archibald

R. C. Booth

Neal Smith

Robert D. Speers

Clyde L. Jenken: Was, Engineer, aqueduct road construction and Distribution Div. Now, Construction Engineer, March Field.

Saul A. Joseph: Was, Purchasing Agent. Now, Purchasing Agent for the Los Angeles Shipbuilding & Dry Dock Corp., San Pedro, Calif.

C. J. Kavanagh: Was, Supt., Pushawalla tunnel camp; Supt. for Broderick and Gordon on the Eagle Mt. tunnels. Now, General Supt. with J. F. Shea Co. on Montebello Water tunnel, Baltimore, Md.

Harry Keeler: Was, Asst. Purchasing Agent. Now, Purchasing Agent California Shipbuilding Co., Los Angeles.

B. C. Leadbetter: Was, Division Engineer, Divisions 4, 5 and 6; General Supt., Coachella tunnels; General Supt., San Jacinto tunnel. Now, General Supt. of Construction at the Leonard Wood Training Camp, Rolla, Mo.

Carl C. Long: Was, Engineer, Electrical-Mechanical Div. Now, Engineer on Bonneville Dam project, in Oregon.

Harry Matthews: Was, Asst. Engineer, Mathews dike and dam; Engineer, Distribution Div. Now, Engineer with the U. S. Engineers, Prado Dam, Riverside Co., Calif.

David C. May: Was, Office Engineer, Div. 2. Now, Engineer at Shasta Dam, Redding, Calif.

Kenneth McIsaacs: Was, Supt., Pushawalla tunnel camp. Now, General Supt. of Construction for J. G. White Corp., Haiti.

Hugh B. McAfee: Was, Clerk, Interviewer, Labor Employment Office; Personnel Office. Now, Public Relations, State Employment Bureau, Los Angeles.

Olga Moehlman: Was, Chief Clerk, Labor Employment Office. Now, with the State Employment Bureau, San Diego, Calif.

Neil A. O'Donnell: Was, Supt., Fargo tunnel camp; Supt., Lawrence Adit, San Jacinto tunnel. Now, Supt. for Compania Huanchaca De Bolivia, Pulacayo, Bolivia.

Edwin (Ed) Noon: Was, Concrete Supt., Potrero Shaft, San Jacinto tunnel. Now, with U. S. Engineers, Corozal, Canal Zone, Panama.

C. R. Rankin: Was, General Supt., San Jacinto tunnel; Consulting Engineer. Now, Supt. of Construction for Underground Fuel Storage contractors, Pacific Naval Air Base, Honolulu.

D. L. Reaburn: Was, Supt., Thousand Palms tunnel camp. Now, Coordinator, Division of Operations, Personnel Training Program, W. P. A., Los Angeles.

Mabel Rockwell: Was, Engineer, Electrical-Mechanical Div. Now, Engineer in Production and Research Dept., Lockheed Corp., Burbank, Calif.

O. J. Schieber: Was, Division Engineer, Div. 4; Senior Engineer. Now, Engineer with Edison Co., Los Angeles.

Spencer J. (Jack) Shrode: Was, Supt., Potrero Shaft, San Jacinto tunnel. Now, Supt. of Construction at Leonard Wood Training Camp, Rolla, Mo.

C. E. (Tim) Sides: Was, Supt., Cabazon Shaft, San Jacinto tunnel. Now, Supt., Cactus Mines Co., Kern County, Calif.

Neal D. Smith: Was, Engineer, Banning Field Hdqrs.; Engineer, Division 3. Now, City Manager, Ontario, Calif.

Robert D. Speers: Was, News writer and Aqueduct News Editor. Now, Publicity Department, Universal Motion Picture Studio, Universal City, Calif.

Richard (Dick) Stephens, Jr.: Was, Office Engineer, Banning Field Hdqrs. Now, Office Engineer, American Section, International Boundary Commission, El Paso, Tex.

John Stearns: Was, Division Engineer, Div. 3. Now, Principal Engineer, Bureau of Yards & Docks, U. S. Navy, Long Beach, Calif.

George Swanman: Was, Payroll Auditor, Accounting Div. Now, Accountant with Fleet Operations Base, U. S. Navy, Long Beach, Calif.

Lewis H. Tuthill: Was, Testing Engineer; Senior Engineer. Now, with Bureau of Reclamation, Denver, Colo.

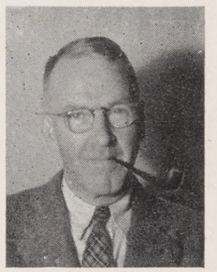
Arthur Volbrecht: Was, General Clerk, Interviewer, Labor Employment Office. Now, in State Employment Office, Huntington Park, Calif.

R. B. (Dick) Ward: Was, Resident Engineer, Mathews Dam. Now, U. S. Bureau of Reclamation, Green Mt. Dam, Colo.

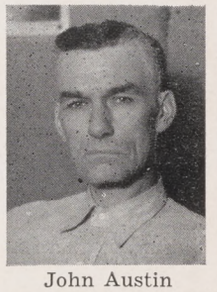
C. P. (Bud) Weaver: Was, Supt. of Operations. Now, Engineer with Stone & Webster, Boulder City, Nev.

W. E. Whittier: Was, Engineer, Distribution Div.; Division Engineer, Div. 1. Now, U. S. Army Engineers, March Field.

E. R. (Ed) Wintz: Was, Engineer, Divisions 5 and 6; Engineer, Distribution Div. Now, Supt. with Macco Construction Co. on the Orange County Feeder of Colorado River Aqueduct.


Col. N. F. Jamieson

Dick Ward

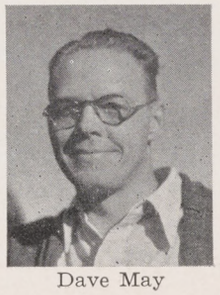

John Austin

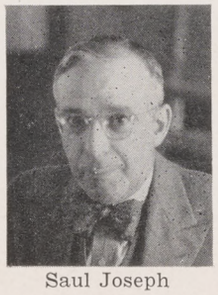
H. A. Beall

M. Hjalmarson

Ed Wintz

Dick Stephens


Dave May


Saul Joseph

Ike Henderson

MONTHLY REPORT REVIEWS ACTIVITIES ALONG THE AQUEDUCT LINE

(EDITOR'S NOTE: The following is a brief summary of some of the activities of the District as set forth in the monthly report of General Manager F. E. Weymouth, filed with the Board of Directors in February, covering work done in January.)

Legal Division

Bills amending the Metropolitan Water District Act and the Municipal Water District Act, so as to permit annexation of the Laguna Beach-South Coast area, were prepared and submitted to the Legislature in the first days of the session and were passed unanimously by both houses.

Miscellaneous Activities Division

During the month of January, 1941, 253 labor employment applicants were cleared for work on the aqueduct. Of this number 8 were made available for force account work and 245 were made available for aqueduct contractors. Identification certificates were issued to 164 applicants. The net turnover for all positions for December, 1940 was 1.93 per cent as compared with 0.78 per cent for the same month in 1939.

Main Aqueduct

Salvage Division—Stock appraised and transferred to the Banning salvage yard to date amounts to $2,364,530.12. Sales during January amounted to $12,-381.26. Total of salvage disbursements to date amounts to $1,517,866.16. The appraised value of stock on hand as of January 13, 1941, amounted to $663,-113.66.

Parker Dam and Power Plant—The forces of the Bureau of Reclamation completed the draft tube forms for power unit 3 and practically completed those for unit 4. The contractor for the penstocks completed unit 1 and practically completed unit 2.

Electrical Engineering Division

Pumping Plants — The pumping plants were operated from January 21 to January 27, delivering 3084 acre feet of water to Lake Mathews.

Civil Engineering Division

Design—Designs were in progress for the chlorination station at the Orange County Reservoir as well as designs of chlorination equipment for this and the Palos Verdes Reservoir station.

Specifications—Four sets of specifications were completed and issued during the month, including specifications No. 351 for lighting fixtures for the water softening plant.

Hydrography—A well survey of the entire San Jacinto basin was made during January in cooperation with the State Division of Water Resources, and a study and compilation of all observations is in progress.

Distribution Division

Field and Office Engineering—Field surveys included setting lines and grades and measuring quantities on all construction work under way. In the office, shop drawings of changes, requested by the contractor in the alignment of the pipe in a portion of Schedule 31P along Olive Avenue, Burbank, were checked as submitted, as well as shop drawings for schedules of the Orange County feeder.

Contract Work—At the softening and filtration plant, the contractor has now done 98 per cent of the earthwork and placed 99 per cent of the concrete, finished and tested all roof tile, completed all interior plastering, continued installing hardware, plumbing fixtures, doors and windows, and sandblasting, priming and applying coal-tar enamel on metal parts exposed to moisture. Laying of pipe for the waste water line was continued.

On the Santa Monica feeder, all construction work on Schedule 29P has been completed, and the placing of concrete invert in Hollywood Tunnel has been completed. Laying of pipe continued on Schedules 34P, 35P and 37SC on the Orange County feeder. On the lateral extensions all work was completed by the contractor on the Compton and Burbank lines, and all pipe construction was finished on the Torrance line. The contractor completed all pipe work for the Morris Reservoir connection and is placing steel in the needle valve structure.

Purchasing Division

The total expenditure covered by 345 purchase orders and 15 agreements issued by this division during the month of January, 1941, aggregated approximately $37,210.00. Carload forwardings totaled 53, of which 43 were cement.

Acounting and Costkeeping

The total cost of the work accomplished to January 31, 1941, was $189,-439,773.87.

How Problems Solved Told in New Book

Recently off the press, the new District publication, "The Great Aqueduct", is now available for distribution.

Telling accurately and in considerable detail the story of the planning, financing and building of the Colorado River Aqueduct, the new booklet is made up of a series of twenty-six authoritative articles contributed by 23 members of the District's administrative and engineering staff. It is illustrated with a large number of full-page photographs of important aqueduct features and shows many of these features as they were being constructed and as they appeared completed and ready to go into operation.

Originally the articles were printed in the Aqueduct News. Many of the cuts used in the booklet are those that have been used on cover pages of the News. The size of the booklet is 8½ by 11 inches, and contains 72 pages of type matter and illustrations. Copies of the publication are being made available to city and county officials in the area of the Metropolitan Water District, and to public libraries and educational institutions. Interested citizens of the District may obtain copies, to the limit of the supply, by calling or writing the District's Information Office.

The chapter headings on the articles reveal the comprehensive manner in which the aqueduct subject is covered. These chapter headings are: Need for Water, Aqueduct Source, Purpose of M. W. D., Financing, Surveys, Design, Specifications, Safety, Construction Water, Construction Roads, Construction Power and Communications, Employment, Conduits, Siphons, Tunnels, Canals, Distribution, Reservoirs, Lake Mathews, Pumping Plants, Transmission System, Testing Laboratory, Special Equipment, Water Softening and Filtration Plant, Operation, and End of a Chapter.

The twenty-three staff members who contributed the material are: C. C. Elder, F. E. Weymouth, Don J. Kinsey, James H. Howard, J. B. Bond, Julian Hinds, Chas. A. Bissell, T. W. Osgood, O. J. Schieber, Clyde L. Jenken, J. O. Binney, N. F. Jamieson, J. L. Burkholder, G. E. Archibald, R. B. Diemer, W. E. Whittier, R. B. Ward, J. M. Gaylord, Verne D. Elliott, Lewis H. Tuthill, Ezra Rider, W. W. Aultman, Lynn Davis Smith.

NEWS FROM FIELD AND OFFICE

Capt. Sigsbee M. Dunlap

Making the fourth District employee to assume active service in the United States Army with the rank of a company commander, Captain Sigsbee M. Dunlap received his orders to report for duty on February 20. He is now Assistant Quartermaster for the new Army hospital in Santa Barbara. Capt. Dunlap has been employed by the District since November, 1931. Starting as a chainman, he progressively held the jobs of rodman, instrumentman, inspector and Assistant Engineer, L. E., in the Distribution Division.

Friends and District associates were happy to learn the other day that George LeBaron, Right of Way and Claims Agent, has been discharged from the Good Samaritan Hospital after a serious illness of several weeks. He is now convalescing at his home in Los Angeles, and expects to return to his duties with the District in the near future.

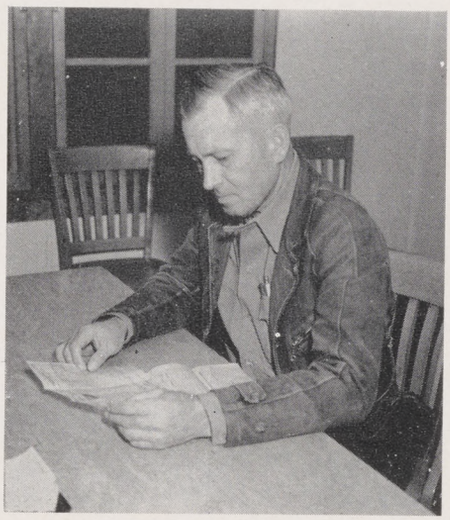
Miss Lillian Hildebrand, who has been with the District since 1931, recently resigned as stenographer in the Design Division to accept a position with Ford J. Twaits and Morrison-Knudsen Co. at Camp Roberts near Paso Robles.

AQUEDUCT TEMPERATURES
Jan. 15, 1941, to Feb. 15, 1941

	Max.	Min.
Gene Pumping Plant	77	38
Iron Mt. Pumping Plant	76	38
Eagle Mt. Pumping Plant	75	38
Banning	68	37
Lake Mathews	74	39

Through the cooperation of the Riverside County Superintendent of Schools, the District has established an elementary school at Eagle Mountain pumping plant camp for the children of employees engaged at that camp and at Hayfield. The school quarters occupy space in one of the temporary camp buildings not now required for the operation of the camp. There are eleven pupils attending the school, which is taught by Mrs. Dorothy Dodson.

Eastern visitors in Southern California are being given an opportunity to see and learn about the Colorado River Aqueduct via motion pictures. Arrangements have been made by Walter Parker of the Miscellaneous Activities Division to exhibit the film, "The Thirteen Golden Cities", to the guests at the larger hotels in Los Angeles, Beverly Hills, Santa Monica and Pasadena. Incidentally, recent audience reports on this District film reveal that it has been seen by more than a million persons.



Here we find Maintenance Engineer Walter J. Neale looking over the daily work reports in his office at Iron Mt. pumping plant (Division 2). Mr. Neale and his crew of maintenance workmen range up and down the line of the main aqueduct keeping in operating order the various sections of the line.

Out at the Softening and Filtration Plant, Engineer W. W. Aultman is busily engaged these days in testing precise and complex equipment that will assure a high quality of water for the cities served by the M. W. D. Aqueduct. Here he has donned a laboratory smock to check up on some control equipment in the zeolite softening section of the plant.

At its meeting on February 18, the Board of Control of the M. W. D. Employees Association declared a dividend for all employees insured under the Employees Group Insurance during the year 1940. Each policy holder who had been insured during the entire 12 months of the year was awarded a dividend of $7.32; employees insured for lesser periods during the year were given proportionate amounts. The unusually large dividend was made possible by the fact that it was not necessary to pay any insurance claims during the year 1940. The dividends are being mailed to all known addresses of former employees qualified for such a benefit. The Board of Control has ruled that to be paid, all dividends must be claimed by July 1, 1941. Thereafter any unclaimed amounts will be paid into the treasury of the Association.

E. W. Putnam, who has been acting head of the Purchasing Division since the resignation of Saul A. Joseph last November, has been appointed Purchasing Agent for the District.

Soft Water

(*Continued from Page 2.*)

c. It should have no color nor develop color on standing.

d. It should taste good.

e. It should have no offensive odor.

f. It should be plentiful.

g. It should preferably be cold.

h. It should be cheap.

Not many water supplies have met these specifications 100% but they represented the goal sought by all.

A water which met all of the above requirements would probably be healthful to drink and would certainly leave nothing to be desired when it came to putting out fires. It might, however, be very unsatisfactory for many domestic and industrial uses. Therefore, in order to more completely meet the requirements of all consumers, the standards of water quality have again been raised and progressive communities are endeavoring to meet them.

In the home, water is used more extensively for cleaning purposes than it is for drinking. Highly mineralized, hard waters make work harder and less satisfactory and are expensive in that they waste soap and cause damage to plumbing systems.

In industry, water is a raw material and, like other raw materials, its quality may affect the efficiency of the process and the quality of the product.

Not only do waters from different sources contain unlike amounts of dissolved substances, but water from the same source may at different times contain widely varying amounts of dissolved substances depending upon a variety of conditions.

In addition to the qualities required to meet health standards, a water supply should have the following characteristics in order to fulfill many domestic and industrial requirements:

a. It should have a low content of the calcium and magnesium salts which make water hard.

b. It should not be corrosive.

c. It should be low in silica content.

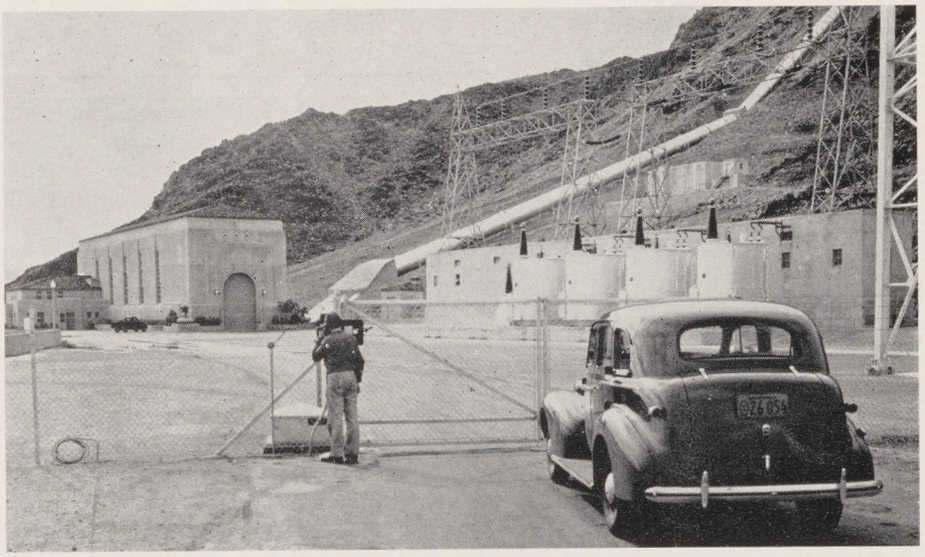
d. It should contain little or no free carbon dioxide.

e. It should have as low a content of dissolved solids as possible.

f. It should be as free from organic matter as possible.

Everyone is familiar with the benefits of soft water in the home. Let anyone who is ignorant on this subject just ask his wife. The difficulties experienced by industry, however, are not so familiar, for each industry may have its own troubles due to water of poor quality. A few instances will be cited to give an idea of the form in which such troubles may appear.

Probably the first difficulty to be experienced by industry in connection with water was the formation of scale in boilers. Consequently boiler waters have been treated in various ways for many years. In fact there have been so many "quack" boiler compounds produced and sold in this country that Congress should pass a power house "Pure Food and Drug Act". There is, however, one sure way to prevent boiler scale, namely, to remove the scale forming constituents from the water by using the softening process which fits both the water and the operating conditions. As is common in such cases, the correct treatment is usually the least expensive also. As an example of how costly hard water can be when used in boilers, a large eastern railroad estimates that the installation of water softeners throughout its system has resulted in a saving of $5,000 per locomotive per year.



All of the aqueduct pumping plants are now enclosed by steel wire fences and admission is given only to those with passes. Here a visitor at Eagle Mt. pumping plant, halted by the locked gate, is calling to the plant operator, using a telephone instrument installed at the gate.

Watching the little lights. Examining the control board for pump motors and circuit breakers at Gene pumping plant are (left to right) Tom Walsh, Field Superintendent of Pumping Plants, Gene Falkenburg, Asst. Superintendent of Pumping Plants, and Ed Russell, Station Chief at Gene and Intake pumping plants.